Systemic Army Environmental Issues: Perspectives and Interpretations

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This paper provides perspectives and interpretations of systemic environmental issues believed to have most significantly influenced the US Army's environmental program over the past decade. For the Army, systemic issues can be categorized into those problems centered on: people, resources, communication, and management and organization. These categories form a foundation for the Army environmental program, such that "problem situations" in these areas can threaten the foundation's stability and affect the Army's ability to continue to develop a sound environmental program.

These problems, as they are presented to the Institute staff, are known to policy analysts as problem situations. Problem situations change over time, and the possible analyses and interventions of these situations change accordingly. Many reported problems could be consolidated, but are intentionally presented separately to emphasize particular views and insights held on these various topics. The Army Environmental Policy Institute (AEPI) monitors these problems situations and analyzes them to help create a bases for understanding the various views that must be combined to form sound policy analyses.

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Abstract

This paper provides perspectives and interpretations of systemic environmental issues believed to have most significantly influenced the U. S. Army's environmental program over the past decade. For the Army, systemic issues can be categorized into those problems centered on: people, resources, communication, and management and organization. These categories form a foundation for the Army environmental program, such that "problem situations" in these areas can threaten the foundation's stability and affect the Army's ability to continue to develop a sound environmental program.

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The mission of the Army Environmental Policy Institute is to assist the Army Secretariat in the development of proactive policies and strategies to address environmental issues that may have significant future impacts on the Army. The views presented in this document do not necessarily reflect policies or views of the Institute contributors, reviewers, and staff.

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Contents

1. Introduction

Mistakes are, after all, the foundation of truth. . .
Knowledge rests not upon truth alone but on error also.
Carl Jung

Systemic issues are those that pertain to or affect the system as a whole. In the context of an organization such as the U. S. Army, and within a major functional program area such as environmental management, systemic issues are those that transcend areas of responsibility and affect the entire program and organization.

Systemic issues are root problems that cut across the organization and prevent strategic change. Systemic issues in the Army environmental program were explored at the first Senior Environmental Leadership Conference (SELC) in 1988, a conference designed to identify barriers to Army environmental compliance, and to begin a process of designing institutional solutions. According to the conferees, the first priority in directing an excellent environmental program is to determine the extent and severity of environmental problems. In brainstorming sessions, workgroups identified the major elements and shortcomings of the program, and formulated systemic solutions to major problems.

Systemic environmental issues have increasingly been discussed since the first SELC. Two further SELCs (1989 and 1991) as well as numerous authors have attempted to address these systemic problems and prescribe remedies for success. Through these conferences and strategic planning efforts, the Army is developing a comprehensive environmental strategy to coordinate and provide direction to total Army environmental activities.

The charter for the Army Environmental Policy Institute (AEPI) cites the importance of focusing on systemic issues, and requires the Institute to recommend policies to address systemic environmental problems and to seek solutions to systemic environmental problems that affect Army installations. The charter also requires the Institute to provide an annual fellowship to an outstanding or promising installation or Major Command (MACOM) environmental specialist for directed study to resolve systemic environmental problems that affect Army installations. The first AEPI MACOM Fellow began the process of identifying and characterizing some

systemic environmental problems. That work provided the initial background material for this paper.

1.1 Purpose

This compilation of systemic environmental issues is intended to provide insights to the salient issues facing the Army now and in the coming years. This report should generate both reinforcing and diverse views and perspectives, and become an intrinsic step toward problem definition and ultimately, problem solving.

This collection of perspectives of major Army systemic environmental issues can be called "problem situations" (MacRae, 1985). Problem situations evolve over time, and corresponding analyses and interventions must also respond accordingly. Articulating problem situations represents an incremental step toward providing policy analysts, environmental program managers, and decision-makers with the insights to more logically and critically define the current conditions and their causes. These insights provide the basis for future policy analysis projects.

This paper is written for a limited audience within the Army environmental community with minimal external distribution. It can be used to inform senior leadership and environmental program managers at all levels of threats and impediments to a sound environmental program. It should be construed as providing a constructive framework from which to launch improvements. It provides a basis for policy analysts to conduct further work to recommend strategic solutions to target these systemic areas.

1.2 Scope

The focus of this paper is intentionally broad; perhaps even general enough to eventually have worldwide implications for the Army. Since systemic issues affect an entire system, a discussion of those issues will be overlapping. As many organizations struggle with environmental management and stewardship, these systemic issues may also have applications to other federal agencies and private industry.

1.3 Methodology

Observations and analyses from an AEPI MACOM Fellow provided the initial framework for this paper. A literature review, as well as personal communications, were conducted to evaluate the range of systemic Army environmental issues. The literature review revealed a number of published sources with similar perspectives and interpretations. The resulting compilation provides insights into the depth and breadth of Army environmental management issues.
The paper also incorporates and builds on recent internal Army efforts to assess challenges and barriers to environmental success. These efforts include the three Senior Environmental Leadership Conferences (1988, 1989, and 1991), Structured Requirements Analysis Planning (STRAP), recent published sources from the U. S. Army War College, and an Army Federal Executive Fellow at the Brookings Institution. Many of these efforts were commissioned by senior Army leadership to assess the current situation. The U. S. Army Environmental Strategy Into the 21st Century defines four broad areas as the foundation blocks of the Army's environmental program. This paper is organized into those four broad areas of emphasis: people, resources, communication, and management and organization.

1.4 Foundation Elements

The Army's environmental strategy is embodied in a paradigm or model of a building supported by four pillars. The foundation that supports the four pillars contains four building blocks: people, resources, communication, and management and organization. These blocks provide the infrastructure that makes all achievements possible. Because the foundation cuts across and supports the entire system, environmental deficiencies are known as systemic environmental problems.

2. People

People are a vital component of a sound organization. It is the Army's people who provide support for environmental stewardship. Trained, competent professionals at all levels are essential to manage and execute an environmental program. This includes an appropriate number and type of positions at adequate grade levels, complemented by programs to recruit, train, and retain quality professionals in those positions. This chapter includes a discussion of:

- Staffing level: the number of authorized positions
- Grade level: the relative level of experience or responsibility assumed by those positions
- Command support and priority: command interest in personnel and staffing issues
- Environmental office structure: how the particular environmental office is organized internally, and also where is fits into the overall installation hierarchy
- Training: continuing education, job-related skills, and professional development
- Liability, responsibility, and authority: issues related to individual duty and obligation.

2.1 Staffing Level

In the Army, as in any organization, qualified professionals are needed to staff an environmental program. For the program to be successful, appropriate numbers of professional staff and support personnel are needed. Various authors have pointed out that environmental compliance is important to any installation, and compliance requires appropriate environmental professional staff and support personnel (Scholl, 1990). By appropriate staff, authors generally mean providing sufficient positions at grade levels commensurate with experience and responsibility (Butts, 1991).

Experts and researchers agree that adequate staffing is crucial to a quality environmental program. However, at Army installations,

"The most common and serious systemic problem is lack of manpower to address the minimum level of environmental protection requirements at the installation and MACOM levels" (Stine, 1991). Stine notes that lack of manpower contributes to administrative and operational Notices of Violation (NOVs). For example, at all Forces Command (FORSCOM) installations, 73 percent to 85 percent of NOVs relate to lack of manpower (Stine, 1991). There are a number of theories to explain this low staffing level, such as a misunderstanding of the staffing level required to sustain a reasonable program, lack of priority in resource allocation, and escalating requirements. Since environmental requirements and responsibilities have emerged over the past 20 years, it has been suggested that civilian personnel offices do not understand the critical problems of the environmental office staffing needs (Stine, 1991). In many cases, researchers find that installation staffing levels are determined by installation size, and not by mission requirements or by the nature or degree of existing environmental compliance problems (Fowler, 1991).

The Army is attempting to correct staffing deficiencies through a U. S. Army Force Integration Support Agency (USAFISA) environmental management Manpower Staffing Standards System (MS^3) study. The MS^3 study is designed to provide a rational basis for determining installation environmental staffing needs. Progress has been slow, but recent efforts in spring 1992 indicate advancements are being made (Gonser, 1992).

As environmental requirements increase and resources (including manpower) decrease, the situation is expected to get more desperate. Scholl observes that, "Inadequate financial resources and continual manpower reductions have made adequate manning for the environmental function appear to be a Herculean task, which most installations chose not to master" (Scholl, 1990). In a world of fixed or declining resources, most installation commanders are reluctant to reduce other staffing to augment environmental staff, which would in turn uncover more environmental problems (Scholl, 1990).

2.2 Grade Level

In federal civilian service, grade level governs an individual's pay, responsibility, and authority. In theory, grade level is based on and increases relative to knowledge, skills, and accomplishments. In

practice, grade levels for environmental professionals are not accurately or consistently related to level of responsibility, especially when compared to industry or other government agencies (Stine, 1991).

Estimates and observations vary as to the average grade levels at installation and MACOM environmental offices. A recent study by the U. S. Army Construction Engineering Research Laboratory (USACERL) concluded that grade levels vary significantly from installation to installation, and particularly across MACOMs (Nemeth, et al., 1991). Stine notes that FORSCOM installation environmental offices are headed by a chief who is at least a General Schedule (GS)-11, and normally a GS-12 or 13. However, most staffers under the chiefs are at the GS-5, 7, or 9 level.

Butts has observed that position descriptions and grade levels should be commensurate with responsibility. Turnover rates and staff retention difficulties demonstrate that this is a problem (Butts, 1991). Fowler describes a tremendous resentment in the field due to inconsistent grade level distribution between Department of the Army (DA) staff at the Pentagon, and in the field. He notes that MACOM coordinators are usually at the General Management (GM)-14 level and installation environmental coordinators are usually at the GS-12 level with staffs in the GS-7 to 11 range (Fowler, 1991).

One result of an inappropriate grade structure is an inability to access higher level decision-makers in a timely manner. The environmental coordinator (EC) is usually several organizational levels down in the Directorate of Engineering and Housing (DEH). Because of the low grade and organizational barriers, the EC does not necessarily have access to the Director of Engineering and Housing, and certainly not the other directors or the commander (Butts, 1991).

On a personal level, an inappropriate grade structure may lead to morale problems manifested in burn-out, high turnover, and resentment. For example, it is difficult for installations to recruit and retain qualified specialists when private industry and other agencies offer relatively higher salaries (Fowler, 1991). Once a person is recruited, there is a concern that the grade structure "fails to recognize the people who arguably are doing the most important work in the environmental arena, and who may be subjected to criminal or civil liability if they fail" (Fowler, 1991).

Finally, Butts and Fowler put the issue in perspective by relating grade distribution to mission and operations, "The environmental program must be adequately staffed, at appropriate grade levels commensurate with responsibility, to maintain a presence in the operational areas of each installation" (Butts, 1991). A focus on mission and operations is essential. "If the Army recognized that the environmental program should be more focused on installation operational issues, the grade structure logically should reflect that focus" (Fowler, 1991). Mission requirements must be satisfied, and all aspects of the environmental program must be organized to accomplish that end. These commentators agree that an improved grade structure for installation environmental professionals is needed to better support installation mission and operational responsibilities.

2.3 Command Support and Priority

Priority and support from command channels and higher headquarters is important, not only to correct existing staffing deficiencies, but to maintain an emphasis on staffing issues and provide the necessary example and support to the environmental staff. The overall observations indicate a lack of support and priority for environmental staffing issues. "Many installation personnel feel that higher headquarters staff have little understanding of their problems and do little to help them. This attitude gets stronger the higher or further away the staffer is from the installations" (Stine, 1991).

Butts explains that this lack of commander support makes the Army environmental program reactive and fragmented. Butts goes on to explain that Army commanders "must recognize that environmental awareness is a part of business in the 90's, as well as the law of the land and the will of the public" (Butts, 1991).

A recent survey confirms the importance of consistent command emphasis. "Most thought there were significant differences in command emphasis among the MACOMs. While some felt that leadership was a prime factor, others believed that the Command's mission was a major factor in determining command emphasis" (Life Systems, 1991).

Command support and priority at all levels is important. Installation commanders and especially MACOM commanders have a significant degree of autonomy. "It is not clear that installation

commanders believe that environmental compliance is a high priority of the Army's leadership; and they are not held accountable for their environmental performance" (Butts, 1991). Recent survey results suggest that command emphasis for the environment varies significantly by Army MACOM (Life Systems, 1991). Priorities and strategies can be imposed on these commanders from senior Army leadership, but even this level of commitment to an environmental ethic is lacking. "Between Washington policy makers and the installation environmental conscience, all commanders and staffs have many competing demands for attention and resources, and some have had insufficient appreciation for environmental requirements" (Scholl, 1990).

2.4 Environmental Office Structure

People and staffing issues are very much related to the way a particular environmental office is organized, and also to where that office fits into the installation's or command's organizational hierarchy. This office structure is inconsistent across MACOMs and different installations. No Army publication provides the Commander with guidance on how to structure the environmental staff (Fowler, 1991).

Several observers commented on the various aspects of environmental office structure. In his survey, Fowler discovered recommendations from the field to correct this deficiency. "Field environmental coordinators who were surveyed agreed that a better, more efficient program would place all environmentally related tasks consolidated under one director who could develop an overall, internally consistent installation program" (Fowler, 1991). Another recent survey produced similar results, "The solution to this problem lies primarily in staffing MACOM and installations to handle the top-heavy pyramid of information needs but also in having a single office which coordinates and reduces redundant and unnecessary requests" (Life Systems, 1991).

Finally, Butts again relates the issue to mission and operations, "At the installation level, a separate, high-level environmental office with access to the commander would greatly improve compliance, reduce environmentalist intervention in base operations, and protect the commander from prosecution" (Butts, 1991).

2.5 Training

Training is a critical component for maintaining qualified, competent and experienced environmental professionals. This is important at all levels, from Headquarters, Department of the Army (HQDA) to the installations. Environmental management training is needed to ensure both compliance and familiarity with regulatory changes (Butts, 1991). Most agreed that there is a critical need to establish both a program and a monitoring system to ensure that environmental training is up to date. Those that did not agree saw the need for training, but were wary of receiving directed DA assistance, and were concerned that the appropriate level and coordination for training is lacking. The U. S. Army Toxic and Hazardous Materials Agency (USATHAMA) has been working to develop a centralized training plan, but final results are desperately needed (Fowler, 1991).

2.6 Responsibility, Authority, and Liability

Responsibility, authority, and liability are related to civilian grade structure. Grade level determines how much autonomy an individual has, and how much access the individual has to command levels. The grade structure fails to recognize the people who may be exposed to criminal or civil liability by their action or inaction (Fowler, 1991). Liability issues also have personal significance to an individual, both the environmental professionals and the commanders. There is much concern about personal civil or criminal liability following the conviction of three Aberdeen Proving Ground managers under the Resource Conservation and Recovery Act (RCRA). "A negative result has been a dysfunctional paranoia among some environmental staff" (Scholl, 1990). Commanders are also concerned. "Many commanders are vulnerable to prosecution and may incur lawsuits against the Army for violating environmental laws because they are insulated from their environmental coordinator (EC) and uninformed" (Butts, 1991).

3. Resources

Adequate resources are needed to maintain a balanced environmental program and to ensure that requirements are integrated into planning and budgeting considerations. Intelligent resource allocation includes using good business practices to accomplish requirements and commitments. Issues covered within this category and described further, include:

- Compliance: marshalling resources to meet legal mandates
- Environmental staffing: relationships between financial resources and the workforce
- Environmental program organization: organizational structure and hierarchy
- Program funding: financial resources necessary to execute the environmental program
- Environmental strategy: unity of purpose and direction expressed by senior leadership.

3.1 Compliance

Compliance addresses all activities that ensure current installation operations meet federal, state, local and applicable host nation environmental requirements and Army regulations. Compliance is a constantly moving target and keeping abreast of changing requirements is an Army responsibility. "Based on EPA's [Environmental Protection Agency's] experience with Army installations, most violations of environmental laws and regulations are administrative and need not occur. They reflect lack of priority on environmental compliance" (Butts, 1990).

A significant program aimed at compliance is the Defense Environmental Restoration Program (DERP), designed to remediate previously polluted sites. One commentator observed that "environmental cleanup is a bottomless pit into which the Army can pour virtually every dollar of its environmental funds and realize little gain in credibility with the environmental lobby, Congress or the regulatory agencies" (Butts, 1991). The commentator further observed that,

"many of today's compliance problems stem from the fact that previous DERA [Defense Environmental Restoration Account] funded contractor-performed work did not anticipate or satisfy today's RCRA or HSWA [Hazardous and Solid Waste Amendments of 1984] based information needs" (Butts, 1991).

Another observer noted that the Army could take advantage of economies of scale in contracting for services if requirements were negotiated on a national or regional scale. "Several coordinators pointed out that each installation must contract for its own environmental projects, yet many projects, such as oil spill clean-up, are Army-wide problems" (Fowler, 1991).

3.2 Environmental Staffing

Identifying, promoting, quantifying and attaining programming support are necessary to achieve the appropriate level of environmental funding and required personnel. Staffing is often a matter of satisfying competing priorities. Installation commanders must prioritize resources, activities, and authorizations according to their perception of meeting the most important requirements. When there are not enough resources to address current and known environmental problems, a commander is unlikely to allocate resources to hiring more staff to look for more trouble. Further, while the civilian workforce is experiencing annual double-digit percentage reductions, commanders are reluctant to further reduce other staff to supplement the environmental staff (Scholl, 1990).

3.3 Environmental Program Organization

The appropriate structure for an efficient and effective environmental program should be integrated into the total Army system. All Army leaders beyond the traditional environmental management hierarchies should be involved in the transactions. One recent survey noted that many of the Army's best and scarce environmental technical and support organizations are spread throughout the Army at organizations such as USATHAMA, Army Environmental Hygiene Agency (AEHA), and in the research and development (R&D) community (Life Systems, 1991). Further, facilities such as installations, depots, and plants do not make full use of these supporting

agencies to identify, manage, or correct environmental problems (Butts, 1991). Stine also strongly recommended coordinating such organizational assets under one single manager (Stine, 1991).

At HQDA, management of the environmental program is a full time responsibility. Several authorities have expressed the belief that the Army has not yet fully realized the implications of the environmental ethic on their mission and operations. Therefore, since it has not established a Department of the Army staff level office for the environment, the Army is inappropriately trying to provide leadership through committees, like the Senior Executive Environmental Council (SEEC) (Butts, 1991). The Army Science Board has also noted that there is no one with the sole responsibility for managing and directing environmental programs (Army Science Board, 1990). This issue is compounded when it comes to compliance. "Because [the Army] has only one legislative liaison officer for environmental legislation, the Army can do no better than react to these legislative assaults. Proactively influencing the environmental legislation of an environmentally-concerned Congress is beyond the capabilities of the weakly-resourced Army environmental programs" (Butts, 1991).

3.4 Program Funding

There is a widely supported perspective that the environmental program is underfunded and lacks priority support from installation commanders. Several observers noted the following: "Field environmentalists are realistic, and they understand competing priorities, but they all see present Army budget practices as a failure to demonstrate the environmental leadership that has been directed by the Secretary of Defense" (Fowler, 1991).

The Army uses 3 EPA-defined classifications to categorize environmental projects:

- Class I: Out of Compliance
- Class II: Soon To Be Out of Compliance
- Class III: Pollution Prevention.

Class I projects must be funded under current Army policy, but funding for most Class II or III projects is at the commander's discretion. Because most installation commanders see mission requirements and base operations as more compelling than environmental requirements, Class II and III projects typically go unfunded. To fund Class II or III, a commander must be willing to reprogram local funds, leaving other programs or requirements underfunded. Most people at the installation, including commanders and the environmental staff, believe the Class I category is too narrow. For example, from one fiscal year to the next, many Class II or III projects can become unfunded Class I projects (Fowler, 1991).

Stine has observed that there has never been a sufficient Defense Environmental Restoration Program budget to fund all Class I projects eligible for DERP funds (Stine, 1991). Further, current spending may be focused in a less appropriate direction. "Environmental cleanup is a bottomless pit into which the Army can pour virtually every dollar of its environmental funds and realize little gain in credibility with the environmental lobby, Congress or the regulatory agencies" (Butts, 1991). "Although the Department estimates that it is spending over $1 billion a year for environmental cleanup and compliance activities, unfunded environmental requirements may exceed $5 billion over the next five years, most of which would be paid out of the operations and maintenance and military construction accounts" (House of Representatives, 1989).

One device proposed to ensure that scarce funds do not "migrate" away from the intended activity in the environmental program is the concept of "fencing," or protecting funds for single purpose use. As of FY92, environmental funding is not fenced, allowing commanders to divert Operation and Maintenance, Army (OMA) account funding earmarked for the environment to other purposes (Butts, 1991). Some environmental coordinators who have convinced their commanders to fund environmental projects are reluctant to recommend DA fencing for fear that it might lead commanders to fund only to the fenced level, and nothing more (Fowler, 1991).

Another resource problem involves unnecessary "hidden" funding requirements mandated by DA. For example, Army Regulation (AR) 200-1, paragraph 10-3, requires every installation to complete an asbestos survey of all buildings on the installation within one

year of the effective date of the regulation, but does not specify where the funds should come from to complete the surveys. "From the field perspective, ['hidden' funding] is another example of DA imposing a program without any appreciation of its effects at the installation level" (Fowler, 1991).

One observer noted an inability to acquire appropriate levels of funding, as well as program obligation. There is an apparent lack of understanding about how to commit resources to meet regulatory or compliance deadlines, as evidenced by inadequate responses to corrective action requirements (Butts, 1991). "In many instances the ability of an installation to respond fully and appropriately to 1990's regulatory requirements, particularly concerning remedial or corrective actions, is impaired by inefficient or ineffective use of these funding sources. Sometimes this seems to follow from lack of knowledge of how to tap these funds, and confusion over which activities are appropriate for funding" (Butts, 1991).

3.5 Environmental Strategy

An environmental strategy provides unity of direction and a cohesive framework. Resources are an essential component of a strategy. Adequate and specific resources must be targeted to the strategy to allow it to be implemented. Butts provides the most powerful and articulate observations regarding the need for a strategy, complete with adequate resources. He explains the need for a clear, focused direction to the environmental program. Without this, "by de facto it is crisis management; struggling with scarce resources and a disparate, multipolar organization to respond to environmental demands from virtually every corner" (Butts, 1991).

Command emphasis is critical to defining, articulating, and carrying out a strategy, both in terms of vision and implementing resources. Butts believes that the current Army environmental organization actually impedes accomplishing a strategy, because "it does not assure command emphasis or place the means with which to execute the strategy at an effective level" (Butts, 1991). Even a perceived lack of command emphasis allows commanders to divert funding earmarked for environmental compliance to other purposes (Butts, 1991).

4. Communication

Both internal and external communication are important to organizational effectiveness. Internal communication assists in streamlining priorities, guidance, and responsibility. External communication assists in effective program management, enhanced cooperation and partnering, and technological development. As a supporting foundation block, communication deficiencies contribute to overall systemic problems. Some important components of effective communication include:

- Communicating the command's environmental commitment
- Communicating outside of the organization to regulators, other agencies, Congress and the public
- Communicating within the organization, both vertically and horizontally
- Disseminating changing regulations and requirements.

4.1 Communicating Command Commitment

Command commitment to the environment is essential, and this must be effectively communicated throughout the organization. "Without increased command emphasis and accountability, environmental awareness and compliance will not improve significantly" (Butts, 1991). Butts further explains that improvement will not occur "unless and until commanders at all levels make it explicitly clear to their subordinates that they are committed to full compliance with the spirit as well as the letter of environmental laws" (Butts, 1991).

Recent survey results confirm these observations that command emphasis for environmental policy is essential. "The dissemination of the Army environmental policy to the soldiers and the public requires a greater emphasis" (Life Systems, 1991). An EPA report on the Army identified that, "All too frequently, minor problems stop at the Facility Engineer or other staff level, with the result that the commander is unaware of the overall compliance status of his organization" (Mathis, 1990).

Several sources have noted that there are some recent advances and developments in communicating command-level support for the environment. These include:

- Establishing the Senior Executive Environmental Council in December 1991
- Adding "Environment" to the title and responsibility of the Assistant Secretary of the Army for Installations and Logistics in November 1989
- Publishing the first edition of the Commander's Guide to Environmental Management in July 1991.

4.2 Other Agencies, Congress, and the Public

Communication with those outside the Army is important. There are many interested parties outside the Army to which it must be accountable, including:

- Other federal state and local agencies, including regulating agencies
- The Congress, which controls funding
- The general public, including special interest or environmental organizations.

It is important for communication to go both ways. The Army needs a clear understanding of regulations and requirements, Congressional priorities and expectations, and public perceptions and expectations. Conversely, the Army must engage in frequent and regular dialogue to demonstrate progress, good faith, and responsiveness to regulators, the Congress, and the general public.

The Army must increase its coordination with regulatory agencies and its public involvement. "There does not seem to be a satisfactory level of involvement or understanding of the Army policy by the public, and the environmental community (local, state and federal agencies) . . . . Misunderstandings among federal agencies as well as between federal and state agencies sometimes make it difficult to communicate the Army's intent" (Life Systems, 1991). Butts

further emphasizes the need, explaining that managers and commanders must make greater efforts to improve communication with the regulatory agencies overseeing their facilities and operations. This should include reviews of past performance, regulatory requirement trends, waste minimization, and community relations (Butts, 1991).

Communication and careful coordination with the EPA is essential. EPA is both responsible for providing technical advice, and also for enforcing statutes. "Clearly, the standards, criteria, and emphasis from EPA and its 10 Regions and 50 States need to be better analyzed and understood . . . . Each installation needs to get out and proactively review the rules of engagement with local EPA/State media representatives" (Scholl, 1990). Scholl further explains that this communication should be coordinated through HQDA or even the Department of Defense (DoD), to consistently transfer coherent guidance from EPA to the MACOMs and installations. "Related to the need for DA to evaluate and work to mitigate unreasonable EPA positions is the field's belief that DA should negotiate with EPA HQ on those issues common to most installations, rather than leaving individual installations to negotiate with their EPA regions" (Fowler, 1991).

Improved communication with regulators can also help the installation better frame its problems and understand its status. The environmental coordinator should use outside assessments and inspections from EPA, states, and local regulatory agencies to assist the environmental management office and other installation staff to comprehensively understand the installation's compliance status (Scholl, 1990).

Interaction and communication with Congress is also essential. Congress must understand how the Army uses existing resources, and how future resource requests will be programmed. When the Army does not clearly communicate its budget and use of resources in a timely manner, Congress is more likely to further restrict environmental appropriations to ensure that they are used for their intended purposes (Scholl, 1990).

4.3 Vertical Communication within the Army

Most of the vertical communication issues involve communication and guidance from HQDA to the installation level. Policies,

requirements, deadlines, and guidance are formulated at the DA level, but execution occurs at the installation or MACOM level. It is essential that the field understand all the expectations and requirements, and receive appropriate assistance. "The single most important disconnect between DA and the field, from the MACOM and field perspective, is the failure of DA to focus its efforts 'downward' to help installations succeed in achieving their environmental missions" (Fowler, 1991). Conversely, it is important that DA be accessible to installations, to be aware of operational requirements and unique situations or constraints. "Many installation personnel feel that higher headquarters staff have little understanding of their problems and do little to help them. This attitude gets stronger the higher or further away the staffer is from the installation" (Stine, 1991).

The vertical communication sometimes simply does not exist, as stated in an EPA report on the Army, "All too frequently, minor problems stop at the Facility Engineer or other staff level, with the result that the commander is unaware of the overall compliance status of his organization" (Mathis, 1990). Further, "Higher headquarters establish new policies without providing guidance or resources to carry the new policies out" (Stine, 1991). Finally, "As policies or programs are established, the field generally is not asked for comments or recommendations, despite the fact that they will have to implement the policies or programs" (Fowler, 1991).

Other times the communication is inappropriately focused, and does not reach the environmental office. At most installations, the environmental coordinator is in the DEH. Being deep within this organization usually prevents the EC from having direct access to the commander and other directors. Also, because the EC is within the DEH, environmental directives come through engineer, not command channels, and do not usually reach the commander (Butts, 1991).

Other reasons for little or inadequate vertical communication include a lack of focus at the DA level. Many people at the installation level feel that DA cannot give consistent, coordinated guidance because the organization is too broad and contains no element that focuses solely on the field (Fowler, 1991). "Not only does the field resent the constant information demands (a great deal of duplication, usually with unreasonably short suspense to reply) from DA, but they

see no willingness on the part of DA to provide practical, affirmative advice and information to the field to help solve specific problems" (Fowler, 1991).

Many commentators agree on the need for enhanced vertical communication. Lack of knowledge of policy, guidance, or Army regulations can lead to instances of non-compliance (Butts, 1991). "Better DA guidance and feedback will enable DA to identify impractical requirements and strengthen field support for those programs and policies that are worthy of implementation .... DA must establish a dialogue with the field, take field recommendations seriously and trust the judgement of installation commanders and environmentalists on prioritizing projects" (Fowler, 1991).

4.4 Horizontal Communication within the Army

"The Army environmental program functions in a highly decentralized manner, and requires both vertical and horizontal integration" (Scholl, 1990). In an organization the size of the U. S. Army, horizontal communication across functional areas is essential. This is necessary to coordinate all decisions and policies with affected parties" (Stine, 1991).

Horizontal communication is also important to disseminate Army environmental policy to all civilian and military personnel, and the public (Life Systems, 1991). There are a variety of environmental execution and support organizations to assist in this horizontal communication, such as the U. S. Army Engineering and Housing Support Center (USAEHSC), Waterways Experiment Station (WES), Corps of Engineers Districts, and USATHAMA, but their roles are not well defined or known at the installation level (Stine, 1991). Since these support roles are not well understood, Facilities are not making full use of available supporting agencies or resources in identifying and managing or correcting environmental problems" (Butts, 1991).

"Improved access to and communication with supporting activities and contractor resources will offer both short and long term benefits" (Butts, 1991). These benefits include awareness and better understanding of compliance issues, improved use of resources, and adequate support to the field.

Communicating with support agencies can improve compliance status. Commanders and environmental coordinators must

coordinate closely with their supporting offices and others, such as USATHAMA, AEHA, and the Corps of Engineers, to ensure that all practices are fully in compliance with state and federal regulations (Butts, 1991). Finally, Fowler states that, "The Army environmental program can be successful only if it is designed to provide adequate support to the field, for that is where the environment must be protected through the environmental compliance program" (Fowler, 1991).

Fowler's survey results suggest establishing a "field cell" at the DA level to provide appropriate coordination and support to the field. "This would be an organization staffed by experts with both substantive expertise and installation level, hands-on experience, who could provide both policy guidance and practical assistance to the field while acting as the field's representative to the rest of the DA staff" (Fowler, 1991). Stine suggests establishing an "environmental clearinghouse" at HQDA, to accomplish the same goals of information exchange among installations, and also between installations, MACOMs, and HQDA (Stine, 1991).

4.5 Guidance, Regulations and Requirements

Various requirements, regulations, and implementing guidance in particular, are among the most important to be communicated. "All too often, lack of knowledge of such guidance at the operating level leads to instances of non-compliance" (Butts, 1991). This includes externally imposed regulations from regulating agencies, and internal DA requirements and expectations. Often, violations occur simply because the requirements were not communicated effectively.

Similarly, resources can be raised inappropriately or ineffectively because of a lack of guidance. Often, there is a lack of knowledge regarding how to tap various funding accounts such as DERA, Military Construction, Army (MCA) accounts and OMA accounts, and confusion over which activities are appropriate for which types of funding. "In many instances the ability of an installation to respond fully and appropriately to 1990's regulatory requirements, particularly concerning remedial or corrective actions, is impaired by inefficient use of these funding sources" (Butts, 1991).

Army regulations and other official documents contain necessary guidance on requirements. Often, these are not up-to-date, or are not disseminated effectively. The requirements for compliance overseas were written many years ago and do not adequately address current environmental considerations (Scholl, 1990). Sometimes guidance is not adequately transmitted to contractors. Work performed under contract in the past did not always meet the requirements of federal, state, local and Army regulations (Butts, 1991).

5. Management and Organization

Management priorities and organizational efficiency affect environmental program management. This includes building and maintaining a multi-disciplined organization, integrating environmental policy into all Army activities, and being proactive and cooperative with the Congress, the public, and regulators. Some important components of this category include:

- Compliance: issues facing management
- Overseas: unique organizational response to overseas requirements
- Environmental program organization: current and future content
- Environmental strategy: a visible expression of command emphasis
- Environmental staffing: present level and future requirements
- Program funding: organizational financial commitment
- Management priority.

5.1 Compliance

Butts offered some observations on the problems of non-compliance. He notes that DoD and Department of Energy (DoE) facilities had largely ignored Congress on toxic and hazardous waste issues (Butts, 1991). The General Accounting Office (GAO) identified the fundamental reason for this high rate of non-compliance in these agencies as "low priority" accorded to compliance with water pollution regulations. Of all federal agencies, GAO concluded that the Army had the largest number of non-compliant facilities (GAO, 1988).

Hazardous waste management is a foremost compliance issue. The issue needs attention just to achieve satisfactory compliance status. During 1989, the full House Armed Services Committee Panel on Environmental Restoration held hearings on environmental com-

pliance and restoration issues. Their report concluded that DoD is making progress with its cleanup efforts, but there are serious obstacles due to overlapping statutory requirements, the degree of federal and state control, and the growing amount of red tape involved (House of Representatives, 1989). Specifically, many installations experience problems in relying on their local Defense Reutilization and Marketing Offices (DRMOs) to assist in timely hazardous waste disposal (Stine, 1991).

5.2 Overseas

The leadership must pay attention to Army activities in host countries and global commons. Management practices that were accepted decades ago will not work today. For example, overseas environmental compliance requirements are included in Status of Forces Agreements (SoFAs) that were written many years ago, and without consideration of current environmental requirements (Scholl, 1990). "While U. S. Army soldiers and civilians have not been prosecuted for noncompliance with current host nation law, foreign national contractors are often required to comply, and the planning and design approval process requires any new construction to be in accordance with current host nation environmental statutes" (Scholl, 1990).

5.3 Environmental Program Organization

Uncertainty exists regarding the best method for organizing the environmental program. Certainly, environmental mandates have increased over the past 20 years and an altered organizational response to these changing requirements is needed. The Army continues to do the job with organizations that have existed for more than 20 years, and predate environmental requirements. No single organization exists with the appropriate command authority to direct a focused environmental management effort. Command authority demands the necessary priority.

Most authorities concur that the existing environmental organization is highly decentralized. This lack of focus and integration prohibits efficient use of resources and program execution. The Army has some excellent environmental technical support organizations,

such as USATHAMA, AEHA, USAEHSC, and the R&D community (Life Systems, 1991), but they are not coordinated and most staff at the installation level do not understand their various roles (Stine, 1991).

Butts also describes the valuable assets in the Army's environmental organization, particularly USATHAMA and the Corps of Engineers. However, "they are not in an organizational position to provide Armywide environmental leadership, or significant expertise in the non-engineering areas of the multidimensional environmental arena" (Butts, 1991).

Butts and Fowler describe organizational problems associated with environmental functions being maintained by engineer channels. "Environmental directives reach MACOMs and installations via engineer, not command, channels and rarely get high priority. Many times directives stay within engineer channels and do not reach the commander" (Butts, 1991). "The seemingly insignificant difference between having the signature of the Chief of Engineers rather than the signature of the Chief of Staff on the preface to the Commander's Guide to Environmental Management reinforces the 'staff program' perception" (Fowler, 1991).

Finally, Butts believes that the existing Army environmental organization lacks the command authority necessary to provide effective program leadership. For example, "No senior officer at Director of the Army Staff (DAS) level has environmental proponency as his primary job. As a result, the program has been unable to gain command emphasis" (Butts, 1991).

5.4 Environmental Strategy

An environmental strategy defines the Army leadership's commitment and its philosophy for meeting current and future challenges. As of June 1992, the Army has no environmental strategy officially adopted by senior leadership. However, the organization continues to work toward this milestone. Observers note that the existing program suffers from a lack of strategic purpose and unity of direction. "There is a current lack of coordination of environmental policies, initiatives, and planning" (Stine, 1991).

As mentioned earlier, Butts contends that the current decentralized environmental organization is an impediment to accomplish-

ing a strategy. Not having a strategy places limits on what can be accomplished, and leaves the Army vulnerable to accusations of environmental inattention, loss of Congressional support, and potential outside interference and limitations on base operations and training (Butts, 1991).

The key element to achieving a comprehensive organizational strategy is command emphasis. A lack of strategy and command emphasis complicates the commanders' environmental management efforts, "thereby increasing their exposure to criminal liability and opening the way for federal and state enforcement agencies to interfere with base operations and training, or to close down production facilities" (Butts, 1991). Butts describes the futility of the situation without the proper leadership support and command emphasis. "It is pointless to talk strategy and environmental stewardship if the Army leadership does not believe that it is facing an environmental crisis, and behave accordingly" (Butts, 1991). Without this, the program remains "trapped in a reactive posture" (Butts, 1991).

5.5 Environmental Staffing

Staffing is an integral component to building and maintaining a quality, multi-disciplinary organization. Issues emphasizing number, grade level (education and commensurate experience), disciplinary type and mix, recruitment, and retention pervade most discussions on environmental staffing.

"Installation level environmental staffing stands out as the notable exception to the Army's significant increases in environmental resources and emphasis . . . . In fact, during the past few years, installation civilian base operations strength has been experiencing annual double-digit percentage reductions. Given this steady, significant reduction in the installations' civilian workforce, few installation commanders further reduced other staffing to augment environmental staffing" (Scholl, 1990).

There is no single institution that focuses on the needs to train and develop the environmental workforce. Fowler laments, "The current Army program suffers from a lack of any centrally directed training program and training opportunities for the field" (Fowler, 1991).

5.6 Program Funding

Until leaders link monetary resources to pronouncements of a commitment to environmental protection, leadership is ineffective. "Field environmentalists . . . . see present Army budget practices as a failure to demonstrate the environmental leadership that has been directed by the Secretary of Defense" (Fowler, 1991). "Any perceived lack of command emphasis risks the diversion by installation commanders of funding earmarked for environmental compliance to other purposes" (Butts, 1991).

Butts crystallizes this issue by commenting, "There is currently a lack of understanding about how to get resources committed in a timely manner to meet regulatory, permit, or compliance deadlines, as evidenced by many instances of inadequate response to corrective action requirements" (Butts, 1991). "Resource management channels need to more clearly and timely communicate allocations of environmental funds to provide installations the opportunity to follow-through on A106 Report 'commitments' and facilitate follow-through on Congressionally mandated action" (Scholl, 1990).

The Army uses an EPA-defined classification system to categorize and fund environmental projects:

- Class I: Out of Compliance
- Class II: Soon to be Out of Compliance
- Class III: Pollution Prevention.

Class I projects must be funded, and, as a result, very few Class II and III projects are also funded. The commander must be willing to reprogram local funds in order to fund Class II and III. Unless installation commanders understand that environmental responsibilities are integral to their mission and operations, this type of reprogramming does not occur (Fowler, 1991).

Protecting funding for single purpose use is referred to as fencing. "Environmental funding is not fenced; OMA funding earmarked for the environment is diverted to other purposes by commanders" (Butts, 1991). "Some environmental coordinators who have been successful in convincing their commanders to provide funds for these projects are reluctant, though, to recommend DA

fencing because they fear that it might lead their commanders to withdraw support over and above the fenced amount" (Fowler, 1991).

5.7 Management Priority

Competing and conflicting priorities are always an issue when managing any enterprise within business or government. "It is not clear that installation commanders believe that environmental compliance is a high priority of the Army's leadership; and they are not held accountable for their environmental performance" (Butts, 1991). "Very little improvement will occur in the Army's Waste Management Program unless and until commanders at all levels make it explicitly clear to their subordinates that they are committed to full compliance with the spirit as well as the letter of environmental laws" (Butts, 1991). "Environmental compliance must be viewed as a cost of doing business. Commanders are in charge and need the support of the entire staff, not just the engineer and environmental coordinator" (Scholl, 1990).

6. Summary and Conclusions

6.1 Summary

This paper provides a collection of systemic environmental issues that are believed to have most significantly influenced the U. S. Army environmental program over the past decade. It contains observations with unique Army implications. Further, this paper consists of numerous perspectives and interpretations reported on environmental problems within the Army. Many of the issues and concerns identified in this paper are interrelated. These issues are intentionally presented separately in order not to foreclose future views and insights held on these various topics.

6.2 Conclusion

The compilation of systemic environmental problems provides policy analysts, environmental program managers, and decision-makers with unique insights on issues facing the Army now and in the coming years.

It is always difficult to take a critical look at oneself, but it is only through such objective critique that an organization can begin to assert fundamental strategic change. This report will generate both reinforcing and diverse views and perspectives, and becomes an intrinsic step toward problem definition and ultimately problem solving. Perspectives on the issues change over time because situations and circumstances change.

This effort does not include a systematic analysis prescribing solutions to the problems and issues described. In-depth policy analyses will be required in each of the foundational areas to comprehensively and creatively examine the interrelations, ambiguities, and uncertainties. Only then can thoughtful and analytical prescriptive solutions be suggested.

This effort should not end with this paper's publication. In fact, this paper represents one point in a series of snapshots of the Army's environmental program. This summary should provoke thought and discussion, and contribute to systemic institutional improvements at all levels. This manuscript should be revisited periodically to add unique perspectives on the issues. Visiting scholars to the

Institute should review this manuscript frequently in order to gain insights on diverse and interrelated issues. Institute MACOM Fellows should be afforded the opportunity to contribute their perspectives gained from years of field experience. This experience is valued and should ultimately be reflected in this manuscript.

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Acronym Glossary

AEHA	Army Environmental Hygiene Agency
AEPI	Army Environmental Policy Institute
AR	Army Regulation
DA	Department of the Army
DAS	Director of Army Staff
DEH	Directorate of Engineering and Housing
DERA	Defense Environment Restoration Account
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DoE	Department of Energy
DRMO	Defense Reutilization and Marketing Office
EC	Environmental Coordinator
EPA	Environmental Protection Agency
FORSCOM	Forces Command
GAO	General Accounting Office
GM	General Management
GS	General Schedule
HQ	Headquarters
HQDA	Headquarters, Department of the Army
HSWA	Hazardous and Solid Waste Amendments of 1984
MACOM	Major Command
MCA	Military Construction, Army
MS[1]	Manpower Staffing Standards System
NOV	Notice of Violation
O&M	Operations and Maintenance
OMA	Operation and Maintenance, Army
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
SEEC	Senior Executive Environmental Council
SELC	Senior Environmental Leadership Conference
SoFA	Status of Forces Agreement
STRAP	Structured Requirements Analysis Planning
USACERL	United States Army Construction Engineering Research Laboratory

Glossary (continued)

USAEHSC	United States Army Engineering and Housing Support Center
USAFISA	United States Army Force Integration Support Agency
USATHAMA	United States Army Toxic and Hazardous Materials Agency
WES	Waterways Experiment Station

Index

F

G

I

L

M

O

P

R

S

T

U